

**ABSTRACT OF THE DISCLOSURE**

A gradient coil system for a magnetic resonance apparatus has an area for receiving an examination subject and at least one gradient coil with an conductor arrangement for generating a magnetic gradient field having a main field component collinear to a basic magnetic field and at least one accompanying component that is perpendicular to the main field component, and at least one further conductor arrangement for feeding electrical current and which is fashioned and arranged for generating a non-homogeneous magnetic field such that the main field component, at least in the area, is approximately unaltered and such that the accompanying field component is reduced.